UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,269	02/28/2002	Hui Chao	10016881-1	1228

7590	03/08/2006	EXAMINER

HEWLETT-PACKARD COMPANY
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ART UNIT	PAPER NUMBER
2176	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>*23 December 2005*</u>.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-24* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-24* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

DETAILED ACTION

1.   This action is responsive to communications: RCE filed 12/23/2005 to the original

application filed 02/28/2002.

2.   Claims 1-24 are currently pending in this application. Claims 1, 9, and 19 have been

amended. Claims 1, 9, and 19 are independent claims.

Request Continuation for Examination

3.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR

1.17(e) has been timely paid, the finality of the previous Office action has been

withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed 12/23/2005 has been

entered.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Claims 19-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

   a.   The limitation "*said modified electronic document*" (claim 19, line 9) lacks

         antecedent basis.

   b.   Dependent claims 20-24 are rejected for fully incorporating the deficiencies of

         their base claim.

Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

*(e) the invention was described in (1) an application for patent, published under section 122(b),by another filed in the
United States before the invention by the applicant for patent or (2)a patent granted on an application for patent by
another filed in the United States before the invention by the applicant for patent, except that an international
application filed under the treaty defined in section 351(a)shall have the effects for the purposes of this subsection of
an application filed in the United States only if the international application designated the United States and was
published under Article 21(2)of such treaty in the English language; or " (Emphasis added.)*

7.   Claims 1-17 are rejected under 35 U.S.C. 102(e) as being anticipated by **Hu et al.** (U.S.

6,542,635 – filed 09/1999).

As to claim 9:

Hu teaches a computer-implemented document layout composition method *(e.g., layout

classification; see the Abstract)*, comprising the steps of:

(i)   determining a separation distance *(e.g., cluster distance)* between a first text

cluster *(e.g., clusters)* and a second text cluster *(e.g., clusters)* of an electronic

document *(e.g., a document)* [col.7, lines 7-27];

(ii)   generating a distance adjustment *(e.g., computing the Manhattan distance*

between the cluster centers closest to each of r_i and r_j; col.7, lines 19-21); and

(iii)   adjusting the separation distance of the electronic document by the distance

adjustment to create a distinct document layout of said electronic document *(e.g.,*

it becomes possible to measure the distance between two rows based on the

distance between the cluster centers nearest to the vectors representing the

respective rows. This cluster distance can be denoted as d^C (r_i and r_j),

representing the distance between interval vectors r_i and r_j by computing the

Manhattan distance between the cluster centers closest to each of r_i and r_j. Thus it

is possible to reduce a sequence of interval vectors to n clusters by replacing

every interval vector with its nearest cluster center; col.7, lines 15-28).

As to claim 10:

Hu teaches the determining, generating, and adjusting steps are performed for two or

more text clusters in the electronic document *(see Abstract & col.1, lines 1-54)*.

As to claim 11:

Hu teaches the determining, generating, and adjusting steps are iteratively performed

(col.4, lines 21-34 & 57-67).

As to claim 12:

Hu teaches adding the distance adjustment to the separation distance *(col.5, line 52-col.6, line 11).*

As to claim 13:

Hu teaches subtracting the distance adjustment from the separation distance *(col.5, line 52-col.6, line 11).*

As to claim 14:

Hu teaches determining whether the separation distance falls within a modifiable range *(col.5, lines 1-54).*

As to claim 15:

Hu teaches the first text cluster and second text cluster are single text lines *(col.7, lines 57-67).*

As to claim 16:

Hu teaches the distance adjustment must be larger than a text line spacing and less than twice the text line spacing *(col.9, lines 1-11).*

As to claim 17:

Hu teaches comparing a layout of the electronic document to one or more pre-existing electronic documents *(e.g., two documents may be compared by their layout; see Abstract & col.6, lines 27-29),* wherein the determining, generating, and adjusting steps are performed if the layout is identical to a pre-existing electronic document *(col.5, line 52-col.6, line 11).*

<u>As to claim 1</u>:

The rejection of claim 9 above is incorporated herein in full. Additionally, Hu teaches a

processor *(e.g., a computer system; col.10, line 60)*; and a memory *(e.g., a memory*

location...is stored; col.10, lines 14-15).

As to claim 2:

Hu teaches two or more text blocks *(e.g., blocks of text; see Abstract & col.4, line 64).*

As to claim 3:

Hu teaches two or more text paragraphs *(see Abstract).*

As to claim 4:

Hu teaches two or more text lines *(e.g., blocks of text; see Abstract & col.4, line 64).*

As to claim 5:

Hu teaches the document storage area stores a plurality of electronic documents *(e.g., a*

memory location...is stored; col.10, lines 14-15).

As to claim 6:

Hu teaches the distance modifier routine modifies the separation distance by a

predetermined distance adjustment *(col.5, line 52-col.6, line 11).*

As to claim 7:

Hu teaches a distance calculator routine that computes the separation distance *(col.4,*

lines 35-44).

As to claim 8:

It includes the same limitations as in claim 17, and is similarly rejected under the same

rationale.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.*

*(b) This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a),
the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions
covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37
CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later
invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35
U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).*

9.   Claims 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hu et al.** in

view of **Bolnick et al.** (U.S. 5,838,317 – filed 06/1995).

As to claim 19:

a.   The rejection of independent claim 9 above is incorporated herein in full.

        Additionally, Hu teaches:

        (i)   comparing a layout of a particular electronic document to layouts of one or

                more pre-existing electronic documents *(e.g., two documents may be

                compared by their layout; see Abstract and col.1, lines 41-67);*

      (ii)   comparing a layout of the modified electronic document to the layouts of the one or more pre-existing electronic documents *(e.g., see the layout comparison discussion, beginning at col.4, line 39)*;

b.   Hu does not specifically teach *"undoing the modifying of the one or more separation distances of the particular electronic document if the layout of the electronic document matches a layout of another electronic document; and changing one or more modification parameters to form a new set of modification parameters."*

c.   Bolnick teaches undoing *(e.g., An Undo entry)* the modifying of the one or more separation distances of the particular electronic document if the layout of the electronic document matches a layout of another electronic document *(e.g., An Undo entry...a previous edit or command operation)*; and changing one or more modification parameters *(e.g., modifying existing layouts...modifies the properties of a selected layout)* to form a new set of modification parameters [*see the Generating New and Editing Existing Layouts discussion; beginning at col.16, line 51]*.

d.   It would have been obvious to one of ordinary skill in the art to have applied the teachings of Bolnick to include the features as claimed because Bolnick's teachings would have provided the capability for enabling a user to reverse the effects of a previous edit or command operation *(see col.17, lines 61-65)*.

As to claim 18:

Refer to discussion of claim 19 above for rejection.

As to claim 20:

Refer to discussion of claim 9 above for rejection.

As to claims 21-24:

Refer to discussion claims 12-14 and 16, respectively, for rejection.

Response to Arguments

11.   Applicants' arguments filed 12/23/2005 have been fully considered but are moot in view

of the new ground(s) rejection.

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

-	Seaman et al.	U.S. Patent No. 6,373,591	Issued: Apr. 16, 2002
-	Bobrow et al.	U.S. Patent No. 6,562,077	Issued: May 13, 2003
-	Seaman et al.	U.S. Patent No. 6,6678,070	Issued: Jan. 13, 2004
-	Chao et al.	U.S. Patent No. 6,801,673	Issued: Oct. 5, 2004

-       H. Chao et al., *"PDF Document Layout Study with Page Elements and Bounding*

Boxes," Workshop on Document Layout Interpretation and Its application, Sep. 9, 2001,

pp. 1-3.

- J. Liang et al., *"Document Layout Structure Extraction Using Bounding Boxes of Different Entities,"* Proceedings Third IEEE Workshop on Applications of Computer Vision, 1996, pp. 278-283.

- P. Smith et al., *"Towards structured, block-based PDF,"* Electronic Publishing, Vol. 8 (2 & 3), Jun. & Sep. 1995, pp. 153-165.

- A. Jain et al., *"Document Representation and Its Application to Page Decomposition,"* IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 20, No. 3, Mar. 1998, pp. 294-308.

- F. Wahl et al., *"Block Segmentation and Text Extraction in Mixed Text/Image Document"*, Computer Graphics and Image Processing 20, 1982, pp. 375-390.

Contact information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maikhanh Nguyen whose telephone number is (571) 272-4093. The examiner can normally be reached on Monday - Friday from 9:00am – 5:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached at (571) 272-4136.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

MN

WILLIAM BASHORE
PRIMARY EXAMINER
3/5/2006